

SEQUENCE LISTING

<110> Takara Shuzo Co., Ltd.

5 <120> A method for amplification of nucleic acids

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10 <151> 1999-03-19

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15 <150> JP 2000-251981

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25 <151> 2001-04-03

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receptor-encoding sequence used as a template

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ccttgcatat tctgagcagt ttctttctgt ttttgcgag 99

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25 <220>

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5 cagcaactgg gccagcaaag tt

22

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<223> Designed oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence

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gcaaaaacag aaagaaactg ct

22

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human transferrin receptor-encoding sequence. "nucleotide 21 is ribonucleotide-other nucleotides are deoxyribonucleotides"

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5 cagcaactgg gccagcaaag ut

22

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gcaaaaacag aaagaaactg ct

22

20 <210> 6

<211> 22

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25 <220>

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5 <400> 6

cagcaactgg gccagcaaag tu

22

<210> 7

<211> 22

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gcaaaaacag aaagaaactg cu

22

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cagcaactgg gccagcaaag uu

22

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gcaaaaacag aaagaaactg cu

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cagcaactgg gccagcaaag tt

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gcaaaaacag aaagaaacug ct

22

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5 amplified portion of human transferrin receptor-encoding sequence

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tgcttttcct ttccttgcat attctg

26

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upper(2)NN to amplify a portion of plasmid pUC19. "nucleotides 24 to
25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 13

attgcttaat cagtgaggca cctau

25

<210> 14

<211> 25

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<213> Artificial Sequence

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<223> Designed chimeric oligonucleotide primer designated as pUC19

5 lower NN to amplify a portion of plasmid pUC19. "nucleotides 24 to 25
are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 14

gataacactg cggccaactt actuc

25

<210> 15

<211> 25

<212> DNA

<213> Artificial Sequence

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<223> Designed chimeric oligonucleotide primer to amplify a portion of
plasmid pUC19. "nucleotides 24 to 25 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

<400> 15

actggcgaac tacttactct agcuu

25

<210> 16

<211> 25

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<213> Artificial Sequence

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5 <223> Designed chimeric oligonucleotide primer designated as pUC19
lower 542 to amplify a portion of plasmid pUC19. "nucleotides 24 to 25
are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 16

10 agtcaccagaa aagcatctta cggau 25

<210> 17

<211> 25

<212> DNA

15 <213> Artificial Sequence

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<223> Designed chimeric oligonucleotide primer to amplify a portion of
plasmid pUC19. "nucleotides 24 to 25 are ribonucleotides-other
20 nucleotides are deoxyribonucleotides"

<400> 17

gctcatgaga caataaccct gataa 25

25 <210> 18

<211> 25

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer designated as pUC19 upper 150 to amplify a portion of plasmid pUC19. "nucleotides 23 to 25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

10 <400> 18

ggtgtcacgc tcgtcgtttg gtaug

25

<210> 19

<211> 25

15 <212> DNA

<213> Artificial Sequence

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20 <223> Designed chimeric oligonucleotide primer designated as pUC19 lower NN to amplify a portion of plasmid pUC19. "nucleotides 23 to 25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 19

gataacactg cggccaactt acuuc

25

25

<210> 20

<211> 25

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed chimeric oligonucleotide primer designated as pUC19 upper 249 to amplify a portion of plasmid pUC19. "nucleotides 23 to 25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

10

<400> 20

cgcctccatc cagtctatta atugu

25

<210> 21

15

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 20 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 21

25

ctgattgaga ggattcctga gu

22

<210> 22

<211> 22

<212> DNA

5 <213> Artificial Sequence

<220>

10 <223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 22

tagggagaga ggaagtgata cu

22

15 <210> 23

<211> 25

<212> DNA

<213> Artificial Sequence

20 <220>

<223> Designed chimeric oligonucleotide primer designated as pUC19 upper(2)NN to amplify a portion of plasmid pUC19. "nucleotides 24 to 25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

25 <400> 23

attgcttaat cagtgaggca cctau

25

<210> 24

<211> 25

5 <212> DNA

<213> Artificial Sequence

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10 <223> Designed chimeric oligonucleotide primer designated as pUC19
upper(2)NN to amplify a portion of plasmid pUC19. "nucleotides 24 to
25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 24

attgcttaat cagtgaggca cctaa

25

15

<210> 25

<211> 25

<212> DNA

<213> Artificial Sequence

20

<220>

<223> Designed chimeric oligonucleotide primer designated as pUC19
upper(2)NN to amplify a portion of plasmid pUC19. "nucleotides 24 to
25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

25

<400> 25

attgcttaat cagtgaggca cctac

25

<210> 26

5 <211> 25

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10 <223> Designed chimeric oligonucleotide primer designated as pUC19 upper(2)NN to amplify a portion of plasmid pUC19. "nucleotides 24 to 25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 26

15 attgcttaat cagtgaggca cctag

25

<210> 27

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<400> 27

ctgattgaga ggattcctga gu

22

5 <210> 28

<211> 22

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15 <400> 28

tagggagaga ggaagtgata cu

22

<210> 29

<211> 24

20 <212> DNA

<213> Artificial Sequence

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<223> Designed chimeric oligonucleotide primer designated as MF2N3(24)
25 to amplify a portion of plasmid pUC19-249 or plasmid pUC19-911.

"nucleotides 22 to 24 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 29

5 gctgcaaggc gattaagttg ggua 24

<210> 30

<211> 24

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as MR1N3(24) to amplify a portion of plasmid pUC19-249 or plasmid pUC19-911.

15 "nucleotides 22 to 24 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 30

ctttatgctt ccggtcgtgta tguu 24

20

<210> 31

<211> 25

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed chimeric oligonucleotide primer designated as pUC19 upper 249 to amplify a portion of plasmid pUC19. "nucleotides 24 to 25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

5

<400> 31

cgcctccatc cagtctatta attgu

25

<210> 32

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as pUC19 upper 150 to amplify a portion of plasmid pUC19

<400> 32

ggtgtcacgc tcgtcgtttg gtatg

25

<210> 33

<211> 25

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed oligonucleotide primer designated as pUC19 upper 249 to
amplify a portion of plasmid pUC19

5

<400> 33

cgctccatc cagtctatta attgt

25

<210> 34

<211> 25

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<212> DNA

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15

<400> 34

gataacactg cggccaactt acttc

25

20

<210> 35

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<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of plasmid pUC19. "nucleotides 28 to 30 are ribonucleotides-other nucleotides are deoxyribonucleotides"

5 <400> 35

ggatgtgctg caaggcgatt aagttgggua

30

<210> 36

<211> 30

10 <212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed chimeric oligonucleotide primer designated as MR1N3 to amplify a portion of plasmid pUC19. "nucleotides 28 to 30 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 36

tttacacttt atgcttcgg ctcgtatguu

30

20

<210> 37

<211> 30

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed oligonucleotide primer to amplify a portion of plasmid pUC19

5 <400> 37

ggatgtgctg caaggcgatt aagttgggta 30

<210> 38

<211> 30

10 <212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed oligonucleotide primer designated as MR1N3 to amplify a portion of plasmid pUC19

<400> 38

tttacacttt atgcttcgg ctcgtatggt 30

20 <210> 39

<211> 30

<212> RNA

<213> Artificial Sequence

25 <220>

<223> Synthetic RNA used as a probe for detecting an amplified portion of plasmid pUC19

<400> 39

5 ugaucceccca uguugugcaa aaaagcgguu

30

<210> 40

<211> 25

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as pUC19 upper 150 to amplify a portion of plasmid pUC19. "nucleotides 24 to 25 are ribonucleotides-other nucleotides are deoxyribonucleotides"

15

<400> 40

ggtgtcacgc tcgtcgtttg gtaug

25

20 <210> 41

<211> 30

<212> DNA

<213> Artificial Sequence

25 <220>

<223> Designed chimeric oligonucleotide primer designated as MR1N3 to amplify a portion of plasmid pUC19. "nucleotides 28 to 30 are ribonucleotides-other nucleotides are deoxyribonucleotides"

5 <400> 41

tttacacttt atgcttccgg ctcgtatguu

30

<210> 42

<211> 17

10 <212> DNA

<213> Artificial Sequence

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<223> Designed oligonucleotide primer designated as M13M4

15

<400> 42

gttttcccag tcacgac

17

<210> 43

20 <211> 18

<212> DNA

<213> Artificial Sequence

<220>

25 <223> Designed chimeric oligonucleotide primer to amplify a portion of

vero toxin 1-encoding sequence from hemorrhagic Escherichia coli O-157. "nucleotides 16 to 18 are ribonucleotides-other nucleotides are deoxyribonucleotides"

5 <400> 43

agttaatgtg gtggcgaa

18

<210> 44

<211> 17

10 <212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 1-encoding sequence from hemorrhagic Escherichia coli O-157. "nucleotides 15 to 17 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 44

20 gactcttcca tctgcca

17

<210> 45

<211> 18

<212> DNA

25 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-
5 157. "nucleotides 16 to 18 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

<400> 45

ttcggatatcc tattcccg 18

<210> 46

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-
157. "nucleotides 16 to 18 are ribonucleotides-other nucleotides are
20 deoxyribonucleotides"

<400> 46

tctctggtca ttgtauaa 18

<210> 47

<211> 22

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer designated as MCR-F to amplify a
long DNA fragment

<400> 47

10 ccattcaggc tgcgcaactg tt

22

<210> 48

<211> 22

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as MCR-R to amplify a
long DNA fragment

20

<400> 48

tggcacgaca ggtttcccga ct

22

<210> 49

25 <211> 24

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed chimeric oligonucleotide primer designated as MF2N3(24)
to amplify a long DNA fragment. "nucleotides 22 to 24 are
ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 49

10 gctgcaaggc gattaagttg ggua 24

<210> 50

<211> 24

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as MR1N3(24)
to amplify a long DNA fragment. "nucleotides 22 to 24 are
20 ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 50

ctttatgctt ccggctcgta tguu 24

25 <210> 51

<211> 20

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

<400> 51

10 aacaacaaga aactggtttc

20

<210> 52

<211> 20

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

20

<400> 52

gcaatgcatg acgactgggg

20

<210> 53

25 <211> 17

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed chimeric oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA. "nucleotides 16 to 17 are ribonucleotides-
other nucleotides are deoxyribonucleotides"

<400> 53

10 gttttcccg tcacgac

17

<210> 54

<211> 17

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA. "nucleotides 16 to 17 are ribonucleotides-
20 other nucleotides are deoxyribonucleotides"

<400> 54

caggaaacag ctatgac

17

25 <210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

<400> 55

10 gtacggtcac catctgacac

20

<210> 56

<211> 20

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

20

<400> 56

gcaatcggca tgttaaacgc

20

<210> 57

25 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

<400> 57

cgccatcctg ggaagactcc

20

<210> 58

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as R1-S1 to amplify a
portion of bacteriophage lambda DNA

<400> 58

tttcacacag gaaacagcta tgacaacaac aagaaactgg ttcc

44

<210> 59

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as R1-A3 to amplify a
5 portion of bacteriophage lambda DNA

<400> 59

tttcacacag gaaacagcta tgacgcaatg catgacgact gggg

44

<210> 60

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as R2-S1 to amplify a
15 portion of bacteriophage lambda DNA

<400> 60

attgtgagcg gataacaatt tcacacagga aacagctatg acaacaacaa gaaactgggtt 60

tc

62

<210> 61

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as R2-A3 to amplify a
5 portion of bacteriophage lambda DNA

<400> 61

attgtgagcg gataacaatt tcacacagga aacagctatg acgcaatgca tgacgactgg 60
gg 62

<210> 62

<211> 95

<212> DNA

<213> Artificial Sequence

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<223> Designed oligonucleotide primer designated as R3-S1 to amplify a
portion of bacteriophage lambda DNA

<400> 62

cactttatgc ttccggctcg tatgttgtgt ggaattgtga gcggataaca atttcacaca 60
ggaaacagct atgacaacaa caagaaactg gtttc 95

<210> 63

<211> 95

<212> DNA

<213> Artificial Sequence

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5 <223> Designed oligonucleotide primer designated as R3-A3 to amplify a
portion of bacteriophage lambda DNA

<400> 63

cactttatgc ttccggctcg tatgttgtgt ggaattgtga gcggataaca atttcacaca 60
10 ggaaacagct atgacgcaat gcatgacgac tgggg 95

<210> 64

<211> 17

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as M13RV-2N
17mer. "nucleotides 16 to 17 are ribonucleotides-other nucleotides are
20 deoxyribonucleotides"

<400> 64

caggaaacag ctatgac 17

25 <210> 65

<211> 20

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed chimeric oligonucleotide primer designated as M13RV-2N 20mer. "nucleotides 19 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

10

<400> 65

acacaggaaa cagctatgac

20

<210> 66

<211> 70

15

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed oligonucleotide primer to amplify a portion of CDC2-related protein kinase PISSLRE gene

<400> 66

gagttcgtgt ccgtacaact atttcacaca ggaaacagct atgacccaac aagagcctat 60

agcttcgctc

70

25

<210> 67

<211> 44

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed oligonucleotide primer to amplify a portion of CDC2-related protein kinase PISSLRE gene

10

<400> 67

tcgaaatcag ccacagcgcc atttcacaca ggaaacagct atgacccgct gtctttgagt 60
tgtggtg 67

<210> 68

15

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed oligonucleotide primer to amplify a portion of Type II cytoskeletal 11 keratin gene

<400> 68

25

gagttcgtgt ccgtacaact atttcacaca ggaaacagct atgacgctat tctgacatca 60
ctttccagac 70

<210> 69

<211> 44

<212> DNA

5 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of Type II
cytoskeletal 11 keratin gene

10

<400> 69

tcgaaatcag ccacagcgcc atttcacaca ggaaacagct atgacgaatt ccactggtgg 60
cagtag 66

15

<210> 70

<211> 62

<212> DNA

<213> Artificial Sequence

20

<220>

<223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

<400> 70

25

attgtgagcg gataacaatt tcacacagga aacagctatg acgtacggtc atcatctgac 60

ac

62

<210> 71

<211> 62

5 <212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

<400> 71

attgtgagcg gataacaatt tcacacagga aacagctatg acatgcgccg cctgaaccac 60

ca

62

15

<210> 72

<211> 62

<212> DNA

<213> Artificial Sequence

20

<220>

<223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

25 <400> 72

attgtgagcg gataacaatt tcacacagga aacagctatg acctgctctg ccgcttcacg 60
ca 62

<210> 73

5 <211> 62

<212> DNA

<213> Artificial Sequence

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10 <223> Designed oligonucleotide primer to amplify a portion of
bacteriophage lambda DNA

<400> 73

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<210> 74

<211> 24

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<223> Designed oligonucleotide primer designated as MF2N3(24) to
amplify a portion of plasmid pUC19-249 or plasmid pUC19-911

25

<400> 74

gctgcaaggc gattaagttg ggta

24

<210> 75

5 <211> 24

<212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed oligonucleotide primer designated as MR1N3(24) to
amplify a portion of plasmid pUC19-249 or plasmid pUC19-911

<400> 75

ctttatgctt ccggctcgta tggt

24

15

<210> 76

<211> 20

<212> DNA

<213> Artificial Sequence

20

<220>

<223> Designed chimeric oligonucleotide primer designated as M13M4-3N
20mer. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

25

<400> 76

agggttttcc cagtcacgac

20

<210> 77

5 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed chimeric oligonucleotide primer designated as M13RV-3N
20mer. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

<400> 77

15 acacaggaaa cagctatgac

20

<210> 78

<211> 24

<212> DNA

20 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as M13M4-3N
24mer. "nucleotides 22 to 24 are ribonucleotides-other nucleotides are
25 deoxyribonucleotides"

<400> 78

cgccagggtt ttcccagtca cgac

24

5 <210> 79

<211> 24

<212> DNA

<213> Artificial Sequence

10 <220>

<223> Designed oligonucleotide primer designated as M13RV-3N 24mer.

"nucleotides 22 to 24 are ribonucleotides-other nucleotides are deoxyribonucleotides"

15 <400> 79

tttcacacag gaaacagcta tgac

24

<210> 80

<211> 70

20 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as 5' ID to amplify a

25 portion of cyclin A DNA

<400> 80

tcgaaatcag ccacagcgcc atttcacaca ggaaacagct atgacatgtt ttgggagaa 60

ttaagtctga 70

5

<210> 81

<211> 44

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed oligonucleotide primer designated as 3' ID to amplify a portion of cyclin A DNA

15

<400> 81

gagttcgtgc cgtacaacta ttacacacag gaaacagcta tgacttacag atttagtgct 60

tctggtggg 69

<210> 82

20

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

25

<223> Designed oligonucleotide primer designated as M13RV-2N 16mer.

"nucleotides 15 to 16 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 82

5 aggaaacagc tatgac

16

<210> 83

<211> 27

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 83

cagcaactgg gccagcaaag uugagaa

27

20 <210> 84

<211> 27

<212> DNA

<213> Artificial Sequence

25 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

5 <400> 84

gcaaaaacag aaagaaactg cucagaa

27

<210> 85

<211> 26

10 <212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 85

cagcaactgg gccagcaaag uugaga

26

20

<210> 86

<211> 26

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

5

<400> 86

gcaaaaacag aaagaaactg cucaga

26

<210> 87

10

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

15

<223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 87

20

cagcaactgg gccagcaaag uugag

25

<210> 88

<211> 25

<212> DNA

25

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 88

gcaaaaacag aaagaaactg cucag

25

<210> 89

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 89

cagcaactgg gccagcaaag uuga

24

<210> 90

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
5 human transferrin receptor-encoding sequence. "nucleotides 21 to 22
are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 90

gcaaaaacag aaagaaactg cuca

24

<210> 91

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
human transferrin receptor-encoding sequence. "nucleotides 21 to 22
are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 91

cagcaactgg gccagcaaag uug

23

<210> 92

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed chimeric oligonucleotide primer to amplify a portion of
human transferrin receptor-encoding sequence. "nucleotides 21 to 22
are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 92

10 gcaaaaacag aaagaaactg cuc

23

<210> 93

<211> 22

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
human transferrin receptor-encoding sequence. "nucleotides 21 to 22
20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 93

cagcaactgg gccagcaaag uu

22

25 <210> 94

<211> 22

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence. "nucleotides 21 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides"

10 <400> 94

gcaaaaacag aaagaaactg cu

22

<210> 95

<211> 22

15 <212> DNA

<213> Artificial Sequence

<220>

20 <223> Designed oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence

<400> 95

caacttcaag gtttctgcca gc

22

25 <210> 96

<211> 21

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer to amplify a portion of human transferrin receptor-encoding sequence

<400> 96

10 aatagtccaa gtagctagag c

21

<210> 97

<211> 20

<212> DNA

15 <213> Artificial Sequence

<220>

<223> PCR primer BsuII-3 for cloning a gene encoding a polypeptide having a RNaseHII activity from Bacillus caldotenax

20

<400> 97

gtcgccagcg cagtnathyt 20

<210> 98

25 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

5 <223> PCR primer Bsull-6 for cloning a gene encoding a polypeptide
having a RNaseHII activity from Bacillus caldotenax

<400> 98

cggtcacctg tcacyttngc 20

10

<210> 99

<211> 20

<212> DNA

<213> Artificial Sequence

15

<220>

<223> PCR primer RNII-S1 for cloning a gene encoding a polypeptide
having a RNaseHII activity from Bacillus caldotenax

20

<400> 99

cgcgcttttc cggcgtcagc 20

<210> 100

<211> 20

25

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR primer RNII-S2 for cloning a gene encoding a polypeptide
5 having a RNaseHII activity from Bacillus caldotenax

<400> 100

acggcgcaag cttcaatttg 20

10 <210> 101

<211> 20

<212> DNA

<213> Artificial Sequence

15 <220>

<223> PCR primer RNII-S5 for cloning a gene encoding a polypeptide
having a RNaseHII activity from Bacillus caldotenax

<400> 101

20 acgcctatatt gccggggcctt 20

<210> 102

<211> 20

<212> DNA

25 <213> Artificial Sequence

<220>

<223> PCR primer RNII-S6 for cloning a gene encoding a polypeptide
having a RNaseHII activity from Bacillus caldotenax

5

<400> 102

atgaccgacg cagcggcgat 20

<210> 103

10

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

15

<223> PCR primer RNII-Nde for cloning a gene encoding a polypeptide
having a RNaseHII activity from Bacillus caldotenax

<400> 103

tagaagaggg agaggcatat gaagcggat acggtgaaa 39

20

<210> 104

<211> 780

<212> DNA

<213> Bacillus caldotenax

25

<400> 104

atgaagcggg atacggtgaa agacattgaa gcgctgcttc cgaagcttgg cgcggacgac 60
 ccgcgctggg agatgctgcg gcaggatgag cgaaaaagcg tgcaggcgct tcttgcccgt 120
 ttgaaagggc agaaagcgcg ccggcacgcc atcgagcagc ggtgggaaga actaatgcgt 180
 5 tatgagaggg aactatacgc cgctggcggt agacggatcg ccggcattga tgaggccggg 240
 cgcggccccg tggccggccc ggtcgtcgcc gcccggtca tcttgccgaa agacgcctat 300
 ttgcccgggc ttgacgactc gaagcggtg acgccggaaa agcgcgaggc attgtttgcg 360
 caaattgaag cgtgcgccgt cgccatcggc atcggcacg tcagcgcggc ggagatcgat 420
 gaaaggaata ttacgaagc gacaaggcaa gcgatggcga aagcggtgaa cgcctttcc 480
 10 ccgcgcctg aacatttgc tgttgatgcg atggcggtgc cgtgccact gccgaacag 540
 cgcctcataa aaggagacgc caacagcgt tcaatcgccg ctgcgtcggt catcgccaaa 600
 gtgacgcgag accggtggat gaaagaactg gatcgccgt atccacaata cgggttcgag 660
 cgccatatgg gctacggaac gccggaacat ttcgaggcga tccgccgcta cggcgttacg 720
 cctgagcacc gtcgttcgtt cgcaccggtg agggaggtgc tgaaggcgag cgagcagctc 780

15

<210> 105

<211> 260

<212> PRT

<213> *Bucillus caldotenax*

20

<400> 105

Met Lys Arg Tyr Thr Val Lys Asp Ile Glu Ala Leu Leu Pro Lys

1	5	10	15
---	---	----	----

Leu Gly Ala Asp Asp Pro Arg Trp Glu Met Leu Arg Gln Asp Glu

25

20

25

30

	Arg Lys Ser Val Gln Ala Leu Leu Ala Arg Phe Glu Arg Gln Lys	
	35	40 45
	Ala Arg Arg His Ala Ile Glu Gln Arg Trp Glu Glu Leu Met Arg	
	50	55 60
5	Tyr Glu Arg Glu Leu Tyr Ala Ala Gly Val Arg Arg Ile Ala Gly	
	65	70 75
	Ile Asp Glu Ala Gly Arg Gly Pro Leu Ala Gly Pro Val Val Ala	
	80	85 90
	Ala Ala Val Ile Leu Pro Lys Asp Ala Tyr Leu Pro Gly Leu Asp	
10	95	100 105
	Asp Ser Lys Arg Leu Thr Pro Glu Lys Arg Glu Ala Leu Phe Ala	
	110	115 120
	Gln Ile Glu Ala Cys Ala Val Ala Ile Gly Ile Gly Ile Val Ser	
	125	130 135
15	Ala Ala Glu Ile Asp Glu Arg Asn Ile Tyr Glu Ala Thr Arg Gln	
	140	145 150
	Ala Met Ala Lys Ala Val Asn Ala Leu Ser Pro Pro Pro Glu His	
	155	160 165
	Leu Leu Val Asp Ala Met Ala Val Pro Cys Pro Leu Pro Gln Gln	
20	170	175 180
	Arg Leu Ile Lys Gly Asp Ala Asn Ser Ala Ser Ile Ala Ala Ala	
	185	190 195
	Ser Val Ile Ala Lys Val Thr Arg Asp Arg Trp Met Lys Glu Leu	
	200	205 210
25	Asp Arg Arg Tyr Pro Gln Tyr Gly Phe Ala Arg His Met Gly Tyr	

215 220 225
Gly Thr Pro Glu His Phe Glu Ala Ile Arg Arg Tyr Gly Val Thr
230 235 240
Pro Glu His Arg Arg Ser Phe Ala Pro Val Arg Glu Val Leu Lys
5 245 250 255
Ala Ser Glu Gln Leu
260

<210> 106

10 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

15 <223> PCR primer BsuIII-1 for cloning a gene encoding a polypeptide
having a RNaseHIII activity from Bacillus caldotenax

<400> 106

ggtaaggtct tggttcargg 20

20

<210> 107

<211> 20

<212> DNA

<213> Artificial Sequence

25

<220>

<223> PCR primer BsuIII-3 for cloning a gene encoding a polypeptide
having a RNaseHIII activity from Bacillus caldotenax

5 <400> 107

ggaaccggag attayttygg 20

<210> 108

<211> 20

10 <212> DNA

<213> Artificial Sequence

<220>

<223> PCR primer BsuIII-6 for cloning a gene encoding a polypeptide
15 having a RNaseHIII activity from Bacillus caldotenax

<400> 108

atgattgaag cagcngcnac 20

20 <210> 109

<211> 20

<212> DNA

<213> Artificial Sequence

25 <220>

<223> PCR primer BsuIII-8 for cloning a gene encoding a polypeptide having a RNaseHIII activity from Bacillus caldotenax

<400> 109

5 gtattggcga aatgnarytt 20

<210> 110

<211> 20

<212> DNA

10 <213> Artificial Sequence

<220>

<223> PCR primer RNIII-S3 for cloning a gene encoding a polypeptide having a RNaseHIII activity from Bacillus caldotenax

15

<400> 110

cccgatcgtc gtcgccgccg 20

<210> 111

20 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

25 <223> PCR primer BcaRNIII-3 for cloning a gene encoding a polypeptide

having a RNaseHIII activity from *Bacillus caldotenax*

<400> 111

gatacgtgga cactttccgc 20

5

<210> 112

<211> 915

<212> DNA

<213> *Bacillus caldotenax*

10

<400> 112

gtgattcaag ccgaccaaca gctgcttgac gccttgccgc cccactacca agacgcctta 60

tccgaccggc ttcgggtgg agcgttggtt gccgtcaagc gcccgatgt cgtcatcacc 120

gcctaccgct caggcaaagt gctgtttcaa gggaaagcgg cggagcaaga agcagcgaaa 180

15 tggatatcag gggcgagcgc ctcaaacgaa acagctgacc accagccgtc cgttttgcca 240

gctcatcaac tcgggtctct ttcggccatc ggttcgatg aagtcggcac cggcgattat 300

ttcggccccga tcgtcgtcgc cggcgccctac gtggatcggc cgcatacgc caaaatcggc 360

gcgcttgggc tgaaagatte gaaacaattg aacgatgagg caatcaaagc gatcgcccc 420

gccatcatgg aaaccgtgcc gcatgcggtc accgtgttg acaatgccga atacaaccgc 480

20 tggcagcgaa gcggcatgcc gcagacgaaa atgaaagcgc tccctcaca cggacgctc 540

gtgaaactcg ttgacgcat cgcggccgcc gaaccagaag caatcatcat cgacgaattt 600

ttaaaacggg attcgtattt ccgttacctt tccgatgaag atcgattat cgcgagcgg 660

gtgcactgcc tteccaagge ggaaagtgt cacgtatcag tcggcgccgc ctgatcatc 720

gcccgtatg tgtttttaga ggagatggag caattatccc gcgcgctgg cctcctgctt 780

25 ccaaaaggcg ccggcgccat tgtcgatgaa gccgcggcca acatcatccg cgcgcggggg 840

gcggaagcgc ttgagacatg cgccaagctt catttcgcca atacaaaaaa ggcgctggac 900
 atcgccaaac gccgg 915

<210> 113

5 <211> 305

<212> PRT

<213> *Bucillus caldotenax*

<400> 113

10	Met	Ile	Gln	Ala	Asp	Gln	Gln	Leu	Leu	Asp	Ala	Leu	Arg	Ala	His
	1			5				10							15
	Tyr	Gln	Asp	Ala	Leu	Ser	Asp	Arg	Leu	Pro	Ala	Gly	Ala	Leu	Phe
				20				25							30
	Ala	Val	Lys	Arg	Pro	Asp	Val	Val	Ile	Thr	Ala	Tyr	Arg	Ser	Gly
15				35				40							45
	Lys	Val	Leu	Phe	Gln	Gly	Lys	Ala	Ala	Glu	Gln	Glu	Ala	Ala	Lys
				50				55							60
	Trp	Ile	Ser	Gly	Ala	Ser	Ala	Ser	Asn	Glu	Thr	Ala	Asp	His	Gln
				65				70							75
20	Pro	Ser	Ala	Leu	Ala	Ala	His	Gln	Leu	Gly	Ser	Leu	Ser	Ala	Ile
				80				85							90
	Gly	Ser	Asp	Glu	Val	Gly	Thr	Gly	Asp	Tyr	Phe	Gly	Pro	Ile	Val
				95				100							105
	Val	Ala	Ala	Ala	Tyr	Val	Asp	Arg	Pro	His	Ile	Ala	Lys	Ile	Ala
25				110				115							120

	Ala Leu Gly Val Lys Asp Ser Lys Gln Leu Asn Asp Glu Ala Ile		
	125	130	135
	Lys Arg Ile Ala Pro Ala Ile Met Glu Thr Val Pro His Ala Val		
	140	145	150
5	Thr Val Leu Asp Asn Ala Glu Tyr Asn Arg Trp Gln Arg Ser Gly		
	155	160	165
	Met Pro Gln Thr Lys Met Lys Ala Leu Leu His Asn Arg Thr Leu		
	170	175	180
	Val Lys Leu Val Asp Ala Ile Ala Pro Ala Glu Pro Glu Ala Ile		
10	185	190	195
	Ile Ile Asp Glu Phe Leu Lys Arg Asp Ser Tyr Phe Arg Tyr Leu		
	200	205	210
	Ser Asp Glu Asp Arg Ile Ile Arg Glu Arg Val His Cys Leu Pro		
	215	220	225
15	Lys Ala Glu Ser Val His Val Ser Val Ala Ala Ala Ser Ile Ile		
	230	235	240
	Ala Arg Tyr Val Phe Leu Glu Glu Met Glu Gln Leu Ser Arg Ala		
	245	250	255
	Val Gly Leu Leu Leu Pro Lys Gly Ala Gly Ala Ile Val Asp Glu		
20	260	265	270
	Ala Ala Ala Asn Ile Ile Arg Ala Arg Gly Ala Glu Ala Leu Glu		
	275	280	285
	Thr Cys Ala Lys Leu His Phe Ala Asn Thr Lys Lys Ala Leu Asp		
	290	295	300
25	Ile Ala Lys Arg Arg		

305

<210> 114

<211> 39

5 <212> DNA

<213> Artificial Sequence

<220>

10 <223> PCR primer BcaRNIIIInde for amplifying a gene encoding a
polypeptide having a RNaseHIII activity from Bacillus caldotenax

<400> 114

cgaacgttgt caaacatat gattcaagcc gaccaacag 39

15 <210> 115

<211> 663

<212> DNA

<213> Pyrococcus horikoshii

20 <400> 115

atgaaggttg ctggagttga tgaagcgggg agggggccgg taattggccc gttagtaatt 60

ggagtagccg ttatagatga gaaaaatatt gagaggttac gtgacattgg ggtaaagac 120

tccaaacaat taactcctgg gcaacgtgaa aaactattta gcaaattaat agatatacta 180

gacgattatt atgttcttct cgttaccccc aaggaaatag atgagaggca tcattctatg 240

25 aatgaactag aagctgagaa attcgttgta gccttgaatt cttaaggat caagccgcag 300

aagatatatg tggactctgc cgatgtagat cctaagaggt ttgctagtct aataaaggct 360
 gggttgaaat atgaagccac gggtatcgcc gagcataaag ccgatgcaaa gtatgagata 420
 gtatcggcag catcaataat tgcaaaggte actaggata gagagataga gaagctaaag 480
 caaaagtatg gggaatttgg ttctggctat ccgagtgatc cgagaactaa ggagtggctt 540
 5 gaagaatatt acaaacaata tgggtgacttt cctccaatag ttaggagaac ttgggaaacc 600
 gctaggaaga tagaggaaag gtttagaaaa aatcagctaa cgcttgataa attccttaag 660
 tga 663

10 <210> 116

<211> 33

<212> DNA

<213> Artificial Sequence

15 <220>

<223> PCR primer 1650Nde for cloning a gene encoding a polypeptide
 having a RNaseHIII activity from Pyrococcus furiosus

<400> 116

20 caggaggaga gacatatgaa aataggggga att 33

<210> 117

<211> 33

<212> DNA

25 <213> Artificial Sequence

<220>

<223> PCR primer 1650Bam for cloning a gene encoding a polypeptide having a RNaseHIII activity from *Pyrococcus furiosus*

5

<400> 117

gaaggttgtg gatccacttt ctaaggtttc tta 33

<210> 118

10

<211> 672

<212> DNA

<213> *Pyrococcus furiosus*

<400> 118

15

atgaaaatag ggggaattga cgaagcagga agaggaccag cgatagggcc attagtagta 60

gctactgtcg tcgttgatga gaaaaacatt gagaagctca gaaacattgg agtaaaagac 120

tccaaacaac taacacccca tgaaaggaag aatttatattt cccagataac ctcaatagcg 180

gatgattaca aaatagtgat agtatcccca gaagaaatcg acaatagatc aggaacaatg 240

aacgagttag aggtagagaa gtttgctctc gccttaaatt cgcttcagat aaaaccagct 300

20

cttatatacg ctgatgcagc ggatgtagat gccaatagat ttgcaagctt gatagagaga 360

agactcaatt ataaggcgaa gattattgcc gaacacaagg ccgatgcaaa gtatccagta 420

gtttcagcag ctccaatact tgcaaagggtt gttagggatg aggaaattga aaaattaaaa 480

aagcaatatg gagactttgg ctctgggtat ccaagtgate caaaaaccaa gaaatggctt 540

gaagagtact acaaaaaaca caactctttc cctccaatag tcagacgaac ctgggaaact 600

25

gtaagaaaaa tagaggaaag cattaaagcc aaaaaatccc agctaacgct tgataaattc 660

tttaagaaac ct 672

<210> 119

<211> 224

5 <212> PRT

<213> *Pyrococcus furiosus*

<400> 119

	Met	Lys	Ile	Gly	Gly	Ile	Asp	Glu	Ala	Gly	Arg	Gly	Pro	Ala	Ile
10	1				5					10					15
	Gly	Pro	Leu	Val	Val	Ala	Thr	Val	Val	Val	Asp	Glu	Lys	Asn	Ile
					20					25					30
	Glu	Lys	Leu	Arg	Asn	Ile	Gly	Val	Lys	Asp	Ser	Lys	Gln	Leu	Thr
					35					40					45
15	Pro	His	Glu	Arg	Lys	Asn	Leu	Phe	Ser	Gln	Ile	Thr	Ser	Ile	Ala
					50					55					60
	Asp	Asp	Tyr	Lys	Ile	Val	Ile	Val	Ser	Pro	Glu	Glu	Ile	Asp	Asn
					65					70					75
	Arg	Ser	Gly	Thr	Met	Asn	Glu	Leu	Glu	Val	Glu	Lys	Phe	Ala	Leu
20					80					85					90
	Ala	Leu	Asn	Ser	Leu	Gln	Ile	Lys	Pro	Ala	Leu	Ile	Tyr	Ala	Asp
					95					100					105
	Ala	Ala	Asp	Val	Asp	Ala	Asn	Arg	Phe	Ala	Ser	Leu	Ile	Glu	Arg
					110					115					120
25	Arg	Leu	Asn	Tyr	Lys	Ala	Lys	Ile	Ile	Ala	Glu	His	Lys	Ala	Asp

	125	130	135
	Ala Lys Tyr Pro Val Val Ser Ala Ala Ser Ile Leu Ala Lys Val		
	140	145	150
	Val Arg Asp Glu Glu Ile Glu Lys Leu Lys Lys Gln Tyr Gly Asp		
5	155	160	165
	Phe Gly Ser Gly Tyr Pro Ser Asp Pro Lys Thr Lys Lys Trp Leu		
	170	175	180
	Glu Glu Tyr Tyr Lys Lys His Asn Ser Phe Pro Pro Ile Val Arg		
	185	190	195
10	Arg Thr Trp Glu Thr Val Arg Lys Ile Glu Glu Ser Ile Lys Ala		
	200	205	210
	Lys Lys Ser Gln Leu Thr Leu Asp Lys Phe Phe Lys Lys Pro		
	215	220	
15	<210> 120		
	<211> 28		
	<212> DNA		
	<213> Artificial Sequence		
20	<220>		
	<223> PCR primer 915-F1 for cloning a gene encoding a polypeptide having a RNaseHII activity from <i>Thermotoga maritima</i>		
	<400> 120		
25	aaaaagcttg ggaatagatg agctttac 28		

<210> 121

<211> 26

<212> DNA

5 <213> Artificial Sequence

<220>

<223> PCR primer 915-F2 for cloning a gene encoding a polypeptide
having a RNaseHII activity from Thermotoga maritima

10

<400> 121

aaaccatggg aatagatgag ctttac 26

<210> 122

15 <211> 29

<212> DNA

<213> Artificial Sequence

<220>

20 <223> PCR primer 915-R1 for cloning a gene encoding a polypeptide
having a RNaseHII activity from Thermotoga maritima

<400> 122

aaatctagat cctcaacttt gtcgatgtg 29

25

<210> 123

<211> 30

<212> DNA

<213> Artificial Sequence

5

<220>

<223> PCR primer 915-R2 for cloning a gene encoding a polypeptide
having a RNaseHII activity from *Thermotoga maritima*

10

<400> 123

aatctagatt aaaaaagagg gagattatgg 30

<210> 124

<211> 22

15

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as MCS-F to amplify a
long DNA fragment

20

<400> 124

ccattcaggc tgcgcaactg tt

22

25

<210> 125

<211> 22

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer designated as MCS-R to amplify a long DNA fragment

<400> 125

10 tggcacgaca ggtttcccga ct

22

<210> 126

<211> 24

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as MF2N3(24) to amplify a long DNA fragment. "nucleotides 22 to 24 are ribonucleotides-other nucleotides are deoxyribonucleotides"

20

<400> 126

gctgcaaggc gattaagttg ggua

24

25 <210> 127

<211> 24

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed chimeric oligonucleotide primer designated as MR1N3(24) to amplify a long DNA fragment. "nucleotides 22 to 24 are ribonucleotides-other nucleotides are deoxyribonucleotides"

10 <400> 127

ctttatgctt ccggctcgta tguu

24

<210> 128

<211> 20

15 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of lambda DNA. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

20

<400> 128

cctttctctg tttttgtccg

20

25

<210> 129

<211> 20

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
lambda DNA. "nucleotides 18 to 20 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

10

<400> 129

aagcacctca ttacctuge

20

<210> 130

15

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed oligonucleotide primer to amplify a portion of lambda
DNA

<400> 130

gggcggcgac ctgcggggtt ttgc

24

25

<210> 131

<211> 24

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed oligonucleotide primer to amplify a portion of lambda
DNA

10

<400> 131

gctgcttatg ctctataaag tagg

24

<210> 132

<211> 20

15

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed chimeric oligonucleotide primer to amplify a portion of
Flavobacterium species DNA. "nucleotides 18 to 20 are ribonucleotides-
other nucleotides are deoxyribonucleotides"

<400> 132

aggaatcttt atttaccaug

20

25

<210> 133

<211> 20

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
Flavobacterium species DNA. "nucleotides 18 to 20 are ribonucleotides-
other nucleotides are deoxyribonucleotides"

10

<400> 133

tggtgtttaa acttattgcg

20

<210> 134

15

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed oligonucleotide primer to amplify a portion of
Flavobacterium species DNA.

<400> 134

ccatcagcta taaacacaaa cagc

24

25

<210> 135

<211> 24

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed oligonucleotide primer to amplify a portion of
Flavobacterium species DNA.

10

<400> 135

tgttttgacc aaacatagta atgc

24

<210> 136

<211> 21

15

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli O-157.
"nucleotides 19 to 21 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

<400> 136

25

tcgttaaata gtatacggac a

21

<210> 137

<211> 20

<212> DNA

5 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.

10 "nucleotides 18 to 20 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

<400> 137

tgctcaataa tcagacgaag

20

15

<210> 49

<211> 24

<212> DNA

<213> Artificial Sequence

20

<220>

<223> Designed oligonucleotide primer to amplify a portion of vero
toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.

25

<400> 138

aaatggggta ctgtgcctgt tact

24

<210> 139

<211> 24

5 <212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed oligonucleotide primer to amplify a portion of vero
toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.

<400> 139

ctctgtatct gcctgaagcg taag

24

15 <210> 140

<211> 21

<212> DNA

<213> Artificial Sequence

20 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.
"nucleotides 18 to 20 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

25

<400> 140

tacctgggtt tttcttcggu a

20

<210> 141

5 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.
"nucleotides 18 to 20 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

15 <400> 141

atagactttt cgaccaaca

20

<210> 142

<211> 20

20 <212> DNA

<213> Artificial Sequence

<220>

25 <223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.

"nucleotides 18 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 142

5 atagacatca agccctcgua 20

<210> 143

<211> 21

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.

15

<400> 143

tcgttaaata gtatacggac a 21

<210> 144

20 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

25 <223> Designed oligonucleotide primer to amplify a portion of vero

toxin 2-encoding sequence from hemorrhagic Escherichia coli O-157.

<400> 144

atagacatca agccctcgta

20

5

<210> 145

<211> 20

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
lambda DNA. "nucleotides 18 to 20 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

15

<400> 145

gaacaatgga agtcaacaaa

20

<210> 146

20

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

25

<223> Designed oligonucleotide primer to amplify a portion of viroid

CSVd.

<400> 146

tacttgtggt tcctgtggtg

20

5

<210> 147

<211> 20

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed oligonucleotide primer to amplify a portion of viroid

CSVd.

15

<400> 147

atactaaggt tccaagggt

20

<210> 148

<211> 18

20

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of

25

viroid CSVd. "nucleotides 16 to 18 are ribonucleotides-other

nucleotides are deoxyribonucleotides"

<400> 148

ggaaacctgg aggaaguc

18

5

<210> 149

<211> 20

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of viroid CSVd. "nucleotides 18 to 20 are ribonucleotides—other nucleotides are deoxyribonucleotides"

15

<400> 149

gtgaaaaccc tgtttaggau

20

<210> 150

20

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

25

<223> Designed chimeric oligonucleotide primer to amplify a portion of

Flavobacterium species DNA. "nucleotides 18 to 20 are ribonucleotides-
other nucleotides are deoxyribonucleotides"

<400> 150

5 acctagatat aagctctaca 20

<210> 151

<211> 20

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
Flavobacterium species DNA. "nucleotides 18 to 20 are ribonucleotides-
15 other nucleotides are deoxyribonucleotides"

<400> 151

aaatagatgt tttagcagag 20

20 <210> 152

<211> 20

<212> DNA

<213> Artificial Sequence

25 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of Flavobacterium species DNA. "nucleotides 18 to 20 are ribonucleotides- other nucleotides are deoxyribonucleotides"

5 <400> 152

atagataaaa aaaactccac

20

<210> 153

<211> 21

10 <212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed chimeric oligonucleotide primer to amplify a portion of vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157. "nucleotides 19 to 21 are ribonucleotides-nucleotide 18 is inosine- other nucleotides are deoxyribonucleotides"

<400> 153

20 tcgttaaata gtatacgiaa a

21

<210> 154

<211> 21

<212> DNA

25 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli O-157.

5 "nucleotides 19 to 21 are ribonucleotides-nucleotide 17 is inosine
other nucleotides are deoxyribonucleotides"

<400> 154

tcgttaaata gtatacigac a

21

10

<210> 155

<211> 21

<212> DNA

<213> Artificial Sequence

15

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli O-157.

20 "nucleotides 19 to 21 are ribonucleotides-nucleotide 16 is inosine-
other nucleotides are deoxyribonucleotides"

<400> 155

tcgttaaata gtataiggac a

21

25

<210> 156

<211> 20

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli O-157.
"nucleotides 18 to 20 are ribonucleotides-nucleotide 17 is inosine-
other nucleotides are deoxyribonucleotides"

10

<400> 156

tgctcaataa tcagaciaag

20

<210> 157

15 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

20 <223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli O-157.
"nucleotides 18 to 20 are ribonucleotides-nucleotide 16 is inosine-
other nucleotides are deoxyribonucleotides"

25 <400> 157

tgctcaataa tcagaigaag

20

<210> 158

<211> 20

5 <212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.
"nucleotides 18 to 20 are ribonucleotides-nucleotide 15 is inosine-
other nucleotides are deoxyribonucleotides"

<400> 158

15 tgctcaataa tcagicgaag

20

<210> 159

<211> 21

<212> DNA

20 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.
25 "nucleotides 9 to 11 and 19 to 21 are ribonucleotides-other

nucleotides are deoxyribonucleotides"

<400> 159

tacctggguu uttcttcggu a

21

5

<210> 160

<211> 20

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.

"nucleotides 8 to 10 and 18 to 20 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

15

<400> 160

atagacauca agccctcgua

20

20

<210> 161

<211> 20

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
 vero toxin 2-encoding sequence from hemorrhagic Escherichia coli O-157.
 "nucleotides 18 to 20 are ribonucleotides-other nucleotides are
 deoxyribonucleotides"

5

<400> 161

gtcccctgag atatatguuc

20

<210> 162

10

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

15

<223> Designed oligonucleotide probe to detect a DNA fragment
 amplifying a portion of vero toxin 2-encoding sequence from hemorrhagic
 Escherichia coli O-157.

<400> 162

20

ccaacaaagt tatgtctctt cgtaaataag

30

<210> 163

<211> 20

<212> DNA

25

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
iNOS-encoding sequence from mouse. "nucleotides 18 to 20 are
5 ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 163

atgccattga gttcatcaac 20

10 <210> 164

<211> 19

<212> DNA

<213> Artificial Sequence

15 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
iNOS-encoding sequence from mouse. "nucleotides 17 to 19 are
ribonucleotides-other nucleotides are deoxyribonucleotides"

20 <400> 164

tcttgggtggc aaagatgag 19

<210> 165

<211> 20

25 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of iNOS-
5 encoding sequence from mouse.

<400> 165

atgccattga gttcatcaac

20

10 <210> 166

<211> 19

<212> DNA

<213> Artificial Sequence

15 <220>

<223> Designed oligonucleotide primer to amplify a portion of iNOS-
encoding sequence from mouse

<400> 166

20 tcttggtggc aaagatgag

19

<210> 167

<211> 20

<212> DNA

25 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as GMO-PCR-F 20mer

5 <400> 167

atcgttgaag atgcctctgc 20

<210> 168

<211> 20

10 <212> DNA

<213> Artificial Sequence

<220>

<223> designed oligonucleotide primer designated as GMO-PCR-R 20mer

15

<400> 168

tccgtatgat cgcgcgtcat 20

<210> 169

20 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

25 <223> Designed chimeric oligonucleotide primer designated as GMO-S1

20mer. "nucleotides 19 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 169

5 tttggagagg acacgtgac 20

<210> 170

<211> 20

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as GMO-S2 20mer.

15 "nucleotides 19 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 170

ggacacgtg acaagctgac 20

20 <210> 171

<211> 20

<212> DNA

<213> Artificial Sequence

25 <220>

<223> Designed oligonucleotide primer designated as GMO-A1 20mer.
 "nucleotides 19 to 20 are ribonucleotides-other nucleotides are
 deoxyribonucleotides"

5 <400> 171

ggctgtagcc actgatgcug

20

<210> 172

<211> 20

10 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as GMO-A2 20 mer.

15 "nucleotides 19 to 20 are ribonucleotides-other nucleotides are
 deoxyribonucleotides"

<400> 172

ttccggaaag gccagaggau

20

20

<210> 173

<211> 21

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.

"nucleotides 18 to 20 are (alpha-thio)ribonucleotides-other
5 nucleotides are deoxyribonucleotides"

<400> 173

tactggggtt tttcttcggu a 20

10 <210> 174

<211> 20

<212> DNA

<213> Artificial Sequence

15 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
vero toxin 2-encoding sequence from hemorrhagic Escherichia coli 0-157.

"nucleotides 18 to 20 are (alpha-thio)ribonucleotides-other
nucleotides are deoxyribonucleotides"

20

<400> 174

atagacatca agccctcgua 20

<210> 175

25 <211> 22

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed chimeric oligonucleotide primer to amplify a portion of
INOS-encoding sequence from mouse. "nucleotides 20 to 22 are
ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 175

10 tcatgccatt gagttcatca ac 22

<210> 176

<211> 22

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
INOS-encoding sequence from mouse. "nucleotides 20 to 22 are
20 ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 176

tggtaggttc ctgttggttc ua 22

25 <210> 177

<211> 22

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer to amplify a portion of INOS-
encoding sequence from mouse.

<400> 177

10 tcatgccatt gagttcatca ac

22

<210> 178

<211> 22

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of INOS-
encoding sequence from mouse.

20

<400> 178

tggtaggttc ctgttgtttc ta

22

<210> 179

25 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed chimeric oligonucleotide primer to amplify a portion of
lambda DNA. "nucleotides 18 to 20 are ribonucleotides-other nucleotides
are deoxyribonucleotides"

<400> 179

10 ctgcgaggcg gtggcaaggg

20

<210> 180

<211> 21

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
lambda DNA. "nucleotides 19 to 21 are ribonucleotides-other nucleotides
20 are deoxyribonucleotides"

<400> 180

ctgcctcgct ggccgtgccg c

21

25 <210> 181

<211> 23

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
INOS-encoding sequence from mouse. "nucleotides 21 to 23 are
ribonucleotides-other nucleotides are deoxyribonucleotides"

10 <400> 181

ctcatgccat tgagttcatc aac

23

<210> 182

<211> 22

15 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
20 INOS-encoding sequence from mouse. "nucleotides 20 to 22 are
ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 182

gctggtaggt tcctgttgtu uc

22

25

<210> 183

<211> 19

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
pDON-AI DNA. "nucleotides 17 to 19 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

10

<400> 183

agctctgtat ctggcggac

19

<210> 184

15

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed chimeric oligonucleotide primer to amplify a portion of
pDON-AI DNA. "nucleotides 19 to 21 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

<400> 184

25

gatcgggatt tttggactca g

21

<210> 185

<211> 21

<212> DNA

5 <213> Artificial Sequence

<220>

10 <223> Designed chimeric oligonucleotide primer to amplify a portion of
HPV type16 DNA. "nucleotides 19 to 21 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

<400> 185

caaaagagaa ctgcaatguu u

21

15 <210> 186

<211> 21

<212> DNA

<213> Artificial Sequence

20 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
HPV type16 DNA. "nucleotides 19 to 21 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

25 <400> 186

gttgcttgca gtacacacau u

21

<210> 187

<211> 27

5 <212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed oligonucleotide probe to detect a DNA fragment
amplifying a portion of HPV DNA.

<400> 187

gaggacccac aggagcgacc cagaaag

27

15 <210> 188

<211> 20

<212> DNA

<213> Artificial Sequence

20 <220>

<223> Designed oligonucleotide primer to amplify a portion of HCV.

<400> 188

cactccacca tgaatcactc

20

25

<210> 189

<211> 20

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed oligonucleotide primer to amplify a portion of HCV.

<400> 189

10

ggtgcacggt ctacgagacc

20

<210> 190

<211> 21

<212> DNA

15

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of HCV. "nucleotides 19 to 21 are ribonucleotides-other nucleotides are deoxyribonucleotides"

20

<400> 190

ctgtgaggaa ctactgtcuu c

21

25

<210> 191

<211> 18

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of HCV. "nucleotides 16 to 18 are ribonucleotides-other nucleotides are deoxyribonucleotides"

10 <400> 191

gcagaccact atggcucu

18

<210> 192

<211> 30

15 <212> DNA

<213> Artificial Sequence

<220>

20 <223> Designed oligonucleotide probe to detect a DNA fragment amplifying portion of HCV.

<400> 192

gtagtagtgt cgtgcagcct ccaggacccc

30

25 <210> 193

<211> 21

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of adenovirus. "nucleotides 19 to 21 are ribonucleotides-other nucleotides are deoxyribonucleotides"

10 <400> 193

tgagacatat tatctgccac g

21

<210> 194

<211> 21

15 <212> DNA

<213> Artificial Sequence

<220>

20 <223> Designed chimeric oligonucleotide primer to amplify a portion of adenovirus. "nucleotides 19 to 21 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 194

aaatggctag gaggtggaag a

21

25

<210> 195

<211> 21

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of adenovirus. "nucleotides 19 to 21 are ribonucleotides-other nucleotides are deoxyribonucleotides"

10

<400> 195

ttatcagcca gtacctctuc g

21

<210> 196

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed oligonucleotide primer to amplify a portion of adenovirus

<400> 196

tgagacatat tatctgccac g

21

25

<210> 197

<211> 21

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed oligonucleotide primer to amplify a portion of adenovirus.

10

<400> 197

aaatggctag gaggtggaag a

21

<210> 198

<211> 20

15

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of viroid CSVd.

20

<400> 198

ggggaaacct ggaggaagtc

20

25

<210> 199

<211> 20

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer to amplify a portion of viroid
CSVd.

<400> 199

10 cgggtagtag ccaaaggaag

20

<210> 200

<211> 19

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of pDON-AI
DNA.

20

<400> 200

agctctgtat ctggcggac

19

<210> 201

25 <211> 21

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed oligonucleotide primer to amplify a portion of pDON-AI
DNA.

<400> 201

gatcgggatt ttggactca g

21

<210> 202

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed chimeric oligonucleotide primer to amplify a portion of
verotoxin-1 encoding sequence from hemorrhagic Escherichia coli 0-
157. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are
20 deoxyribonucleotides"

<400> 202

ggggataatt tgtttcagu

20

25 <210> 203

<211> 20

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
verotoxin-1 encoding sequence from hemorrhagic Escherichia coli 0-
157. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

10

<400> 203

tcgttcaaca ataagccgua

20

<210> 204

15 <211> 30

<212> DNA

<213> Artificial Sequence

<220>

20 <223> Designed oligonucleotide probe to detect a DNA fragment
amplifying a portion of verotoxin-1 encoding sequence from hemorrhagic
Escherichia coli 0-157.

<400> 204

25 cgcccttctct ctggatctac ccctctgaca

30

<210> 205

<211> 21

<212> DNA

5 <213> Artificial Sequence

<220>

10 <223> Designed chimeric oligonucleotide primer to amplify a portion of
botulinum toxin A encoding sequence from Clostridium
botulinum. "nucleotides 19 to 21 are ribonucleotides-other nucleotides
are deoxyribonucleotides"

<400> 205

caccagaagc aaaacaaguu c

21

15

<210> 206

<211> 23

<212> DNA

<213> Artificial Sequence

20

<220>

25 <223> Designed chimeric oligonucleotide primer to amplify a portion of
botulinum toxin A encoding sequence from Clostridium
botulinum. "nucleotides 21 to 23 are ribonucleotides-other nucleotides
are deoxyribonucleotides"

<400> 206

ctattgatgt taacaacatt cuu

23

5 <210> 207

<211> 30

<212> DNA

<213> Artificial Sequence

10 <220>

<223> Designed oligonucleotide probe to detect a DNA fragment
amplifying a portion of botulinum toxin A encoding sequence from
Clostridium botulinum.

15 <400> 207

gggagttaca aaattatttg agagaattta

30

<210> 208

<211> 21

20 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
25 viroid CSVd. "nucleotides 19 to 21 are ribonucleotides-other

nucleotides are deoxyribonucleotides"

<400> 208

cacccttcct ttagtttccu u

21

5

<210> 209

<211> 20

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of viroid CSVd. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

15

<400> 209

cgttgaagct tcagttguuu

20

<210> 210

20

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

25

<223> Designed oligonucleotide probe to detect a DNA fragment

amplifying a portion of viroid CSVd.

<400> 210

ccttcctctc ctggagaggt cttctgccct

30

5

<210> 211

<211> 21

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of viroid CSVd. "nucleotides 19 to 21 are ribonucleotides-other nucleotides are deoxyribonucleotides"

15

<400> 211

cacccttcct ttagtttccu u

21

<210> 212

20

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

25

<223> Designed chimeric oligonucleotide primer to amplify a portion of

viroid CSVd. "nucleotides 19 to 21 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 212

5 cgttgaagct tcagttgtuu c 21

<210> 213

<211> 21

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of viroid CSVd.

15

<400> 213

cacccttct ttagtttct t 21

<210> 214

20 <211> 21

<212> DNA

<213> Artificial Sequence

<220>

25 <223> Designed oligonucleotide primer to amplify a portion of viroid

CSVd.

<400> 214

cgttgaagct

tcagttgttt

c

5

21

<210> 215

<211> 20

<212> DNA

10

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
c-ki-ras oncogene. "nucleotides 18 to 20 are ribonucleotides-other
nucleotides are deoxyribonucleotides"

15

<400> 215

gactgaatat aaacttgugg

20

20

<210> 216

<211> 20

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of c-ki-ras oncogene. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

5 <400> 216

ctattgttgg atcatatucg

20

<210> 217

<211> 20

10 <212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed oligonucleotide primer to amplify a portion of c-ki-ras oncogene.

<400> 217

gactgaatat aaacttgttg

20

20 <210> 218

<211> 20

<212> DNA

<213> Artificial Sequence

25 <220>

<223> Designed oligonucleotide primer to amplify a portion of c-ki-ras oncogene.

<400> 218

5 ctattgttgatcatattcg
20

<210> 219

<211> 20

10 <212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed chimeric oligonucleotide primer to amplify a portion of verotoxin-2 encoding sequence from hemorrhagic Escherichia coli 0-157. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 219

20 gacttttcga cccaacaaag

20

<210> 220

<211> 20

<212> DNA

25 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer to amplify a portion of
verotoxin-2 encoding sequence from hemorrhagic Escherichia coli 0-
5 157. "nucleotides 18 to 20 are ribonucleotides-other nucleotides are
deoxyribonucleotides"

<400> 220

atatccacag caaaataacu

20

<210> 221

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of INOS-
encoding sequence from mouse.

<400> 221

cacaaggcca catcggattt c

21

<210> 222

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of INOS-
5 encoding sequence from mouse.

<400> 222

tgcataccac ttcaaccga g

21

10 <210> 223

<211> 25

<212> DNA

<213> Artificial Sequence

15 <220>

<223> Designed oligonucleotide primer designated as pUC19 upper 150 to
amplify a portion of plasmid pUC19.

<400> 223

20 ggtgtcacgc tcgtcgtttg gtatg

25

<210> 224

<211> 25

<212> DNA

25 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as pUC19 lower NN to amplify a portion of plasmid pUC19.

5

<400> 224

gataacactg cggccaactt acttc

25

<210> 225

10

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

15

<223> Designed chimeric oligonucleotide primer designated as SEA-1 to amplify a portion of Staphylococcus aureus. "nucleotides 19 to 21 are ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 225

20

tgtatgtatg gtggtgtaac g

21

<210> 226

<211> 21

<212> DNA

25

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as SEA-2 to
amplify a portion of Staphylococcus aureus. "nucleotides 19 to 21 are
5 ribonucleotides-other nucleotides are deoxyribonucleotides"

<400> 226

taaccgtttc caaaggtacu g

21

<210> 227

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as HCV-F3 to
amplify a portion of HCV. "nucleotides 17 to 19 are ribonucleotides-
other nucleotides are deoxyribonucleotides"

<400> 227

gcgtctagcc atggcguua

19

<210> 228

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed chimeric oligonucleotide primer designated as HCV-R1 to
amplify a portion of HCV. "nucleotides 16 to 18 are ribonucleotides-
other nucleotides are deoxyribonucleotides"

<400> 228

gcagaccact atggcucu

18

<210> 229

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as MF2 to amplify a
portion of pUC19 plasmid DNA.

<400> 229

ggatgtgctg caaggcgatt aagttgggta

30

<210> 230

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as MR1 to amplify a
5 portion of pUC19 plasmid DNA.

<400> 230

tttacacttt atgcttccgg ctcgatatgtt

30

10 <210> 231

<211> 21

<212> DNA

<213> Artificial Sequence

15 <220>

<223> Designed oligonucleotide primer to amplify a portion of
adenovirus.

<400> 231

20 ttatcagcca gtacctcttc g

21

<210> 232

<211> 714

<212> DNA

25 <213> Thermotoga maritima

<400> 232

atgggaatag atgagcttta caaaaaagag tttggaatcg tagcaggtgt ggatgaagcg 60
 ggaagagggt gcctcgcagg tcccgttggt ggcggcgtg tcgttctgga aaaagaaata 120
 5 gaaggaataa acgattcaaa acagctttcc cctgcgaaga gggaaagact tttagatgaa 180
 ataatggaga aggcagcagt tgggttagga attgcgtctc cagaggaaat agatctctac 240
 aacatattca atgccacaaa acttgctatg aatcgagcac tggagaacct gtctgtgaaa 300
 ccatcatttg tactcgttga cgggaaagga atcgagttga gcgttcccggt tacatgctta 360
 gtgaagggag accagaaaag caaattgata ggagcagctt ccattgttgc gaaggctctc 420
 10 agagatagat tgatgagcga gtttcacagg atgtatccac agttttcctt ccacaaacac 480
 aaaggttacg ccacaaaaga acatctgaac gaaatcagaa agaacggagt tttaccaatc 540
 caccggctga gttttgaacc tgttttagaa ctctgaccg atgatttggt gagggagttc 600
 ttcgaaaaag gcctcatctc cgaaaatcga ttcgaaacgaa tattgaatct tctgggggcg 660
 agaaaaagtg tggttttccg gaaagaaaga acaaaccata atctccctct tttt 714

<210> 233

<211> 238

<212> PRT

<213> *Thermotoga maritima*

<400> 233

Met Gly Ile Asp Glu Leu Tyr Lys Lys Glu Phe Gly Ile Val Ala

1	5	10	15
---	---	----	----

Gly Val Asp Glu Ala Gly Arg Gly Cys Leu Ala Gly Pro Val Val

25	20	25	30
----	----	----	----

	Ala Ala Ala Val Val Leu Glu Lys Glu Ile Glu Gly Ile Asn Asp	
	35	40 45
	Ser Lys Gln Leu Ser Pro Ala Lys Arg Glu Arg Leu Leu Asp Glu	
	50	55 60
5	Ile Met Glu Lys Ala Ala Val Gly Leu Gly Ile Ala Ser Pro Glu	
	65	70 75
	Glu Ile Asp Leu Tyr Asn Ile Phe Asn Ala Thr Lys Leu Ala Met	
	80	85 90
	Asn Arg Ala Leu Glu Asn Leu Ser Val Lys Pro Ser Phe Val Leu	
10	95	100 105
	Val Asp Gly Lys Gly Ile Glu Leu Ser Val Pro Gly Thr Cys Leu	
	110	115 120
	Val Lys Gly Asp Gln Lys Ser Lys Leu Ile Gly Ala Ala Ser Ile	
	125	130 135
15	Val Ala Lys Val Phe Arg Asp Arg Leu Met Ser Glu Phe His Arg	
	140	145 150
	Met Tyr Pro Gln Phe Ser Phe His Lys His Lys Gly Tyr Ala Thr	
	155	160 165
	Lys Glu His Leu Asn Glu Ile Arg Lys Asn Gly Val Leu Pro Ile	
20	170	175 180
	His Arg Leu Ser Phe Glu Pro Val Leu Glu Leu Leu Thr Asp Asp	
	185	190 195
	Leu Leu Arg Glu Phe Phe Glu Lys Gly Leu Ile Ser Glu Asn Arg	
	200	205 210
25	Phe Glu Arg Ile Leu Asn Leu Leu Gly Ala Arg Lys Ser Val Val	

215

220

225

Phe Arg Lys Glu Arg Thr Asn His Asn Leu Pro Leu Phe

230

235

5 <210> 234

<211> 663

<212> DNA

<213> *Pyrococcus horikoshii*

10 <400> 234

atgaaggttg ctggagttga tgaagcgggg agggggccgg taattggccc gttagtaatt 60

ggagtagccg ttatagatga gaaaaatatt gagaggttac gtgacattgg ggttaaagac 120

tccaaacaat taactcctgg gcaacgtgaa aaactattta gcaaattaat agatatacta 180

gacgattatt atgttcttct cgttaccccc aaggaaatag atgagaggca tcattctatg 240

15 aatgaactag aagctgagaa attcgttgta gccttgaatt ctttaaggat caagccgcag 300

aagatatatg tggactctgc cgatgtagat cctaagaggt ttgctagtct aataaaggct 360

gggttgaaat atgaagccac ggttatcgcc gagcataaag ccgatgcaaa gtatgagata 420

gtatcggcag catcaataat tgcaaaggtc actagggata gagagataga gaagctaaag 480

caaaagtatg gggaatttgg ttctggctat ccgagtgate cgagaactaa ggagtggctt 540

20 gaagaatatt acaaacaata tggtagcttt cctccaatag ttaggagaac ttgggaaacc 600

gctaggaaga tagaggaaag gtttagaaaa aatcagctaa cgcttgataa attccttaag 660

tga 663

<210> 235

25 <211> 30

<212> DNA

<213> Artificial Sequence

<220>

5 <223> PCR primer PhoNde for cloning a gene encoding a polypeptide
having a RNaseHII activity from Pyrococcus horikoshii

<400> 235

aggaggaaaa tcatatgaag gttgctggag 30

10

<210> 236

<211> 30

<212> DNA

<213> Artificial Sequence

15

<220>

<223> PCR primer PhoBam for cloning a gene encoding a polypeptide
having a RNaseHII activity from Pyrococcus horikoshii

20

<400> 236

ttacatgaag gatccaagat cacttaagga 30

<210> 237

<211> 663

25

<212> DNA

<213> *Pyrococcus horikoshii*

<400> 237

atgaaggttg ctggagttga tgaagcgggg agggggccgg taattggccc gttagtaatt 60
 5 ggagtagccg ttatagatga gaaaaatatt gagaggttac gtgacattgg ggttaaagac 120
 tccaaacaat taactcctgg gcaacgtgaa aaactattta gcaaattaat agatatecta 180
 gacgattatt atgtttcttct cgttaccccc aaggaaatag atgagaggca tcattctatg 240
 aatgaactag aagctgagaa attcgttgta gccttgaatt ctttaaggat caagccgcag 300
 aagatatatg tggactctgc cgatgtagat cctaagaggt ttgctagtct aataaaggct 360
 10 gggttgaaat atgaagccac ggttatcgcc gagcataaag ccgatgcaaa gtatgagata 420
 gtatcggcag catcaataat tgcaaaggtc actagggata gagagataga gaagctaaag 480
 caaaagtatg gggaatttgg ttctggctat ccgagtgate cgagaactaa ggagtggctt 540
 gaagaatatt acaaacaata tggtgacttt cctccaatag ttaggagaac ttgggaaacc 600
 gctaggaaga tagaggaaag gtttagaaaa aatcagctaa cgcttgataa attccttaag 660
 15 tgatcttgga tcc 663

<210> 238

<211> 220

<212> PRT

20 <213> *Pyrococcus horikoshii*

<400> 238

Met Lys Val Ala Gly Val Asp Glu Ala Gly Arg Gly Pro Val Ile

1

5

10

15

25 Gly Pro Leu Val Ile Gly Val Ala Val Ile Asp Glu Lys Asn Ile

	20	25	30
	Glu Arg Leu Arg Asp Ile Gly Val Lys Asp Ser Lys Gln Leu Thr		
	35	40	45
	Pro Gly Gln Arg Glu Lys Leu Phe Ser Lys Leu Ile Asp Ile Leu		
5	50	55	60
	Asp Asp Tyr Tyr Val Leu Leu Val Thr Pro Lys Glu Ile Asp Glu		
	65	70	75
	Arg His His Ser Met Asn Glu Leu Glu Ala Glu Lys Phe Val Val		
	80	85	90
10	Ala Leu Asn Ser Leu Arg Ile Lys Pro Gln Lys Ile Tyr Val Asp		
	95	100	105
	Ser Ala Asp Val Asp Pro Lys Arg Phe Ala Ser Leu Ile Lys Ala		
	110	115	120
	Gly Leu Lys Tyr Glu Ala Thr Val Ile Ala Glu His Lys Ala Asp		
15	125	130	135
	Ala Lys Tyr Glu Ile Val Ser Ala Ala Ser Ile Ile Ala Lys Val		
	140	145	150
	Thr Arg Asp Arg Glu Ile Glu Lys Leu Lys Gln Lys Tyr Gly Glu		
	155	160	165
20	Phe Gly Ser Gly Tyr Pro Ser Asp Pro Arg Thr Lys Glu Trp Leu		
	170	175	180
	Glu Glu Tyr Tyr Lys Gln Tyr Gly Asp Phe Pro Pro Ile Val Arg		
	185	190	195
	Arg Thr Trp Glu Thr Ala Arg Lys Ile Glu Glu Arg Phe Arg Lys		
25	200	205	210

Asn Gln Leu Thr Leu Asp Lys Phe Leu Lys

215

220

<210> 239

5 <211> 626

<212> DNA

<213> *Archaeoglobus fulgidus*

<400> 239

10 atgaaggcag gcatcgatga ggctggaaag ggctgcgtca tcggcccact gttgtttgca 60
 ggagtggctt gcagcgatga ggataggctg agaaagcttg gtgtgaaaga ctccaaaaag 120
 ctaagtcagg ggaggagaga ggaactagcc gaggaataa ggaaaatctg cagaacggag 180
 gttttgaaag ttctctccga aaatctcgac gaaaggatgg ctgctaaaac cataaacgag 240
 attttgaagg agtgctacgc tgaaataatt ctcaggctga agccggaaat tgcttatgtt 300
 15 gacagtcctg atgtgattcc cgagagactt tcgagggagc ttgaggagat tacggggttg 360
 agagttgtgg ccgagcaciaa ggcggacgag aagtatcccc tggtagctgc ggcttcaatc 420
 atcgcaaagg tggaaaggga gcgggagatt gagaggctga aagaaaaatt cggggatttc 480
 ggcagcggct atcgagcga tccgaggaca agagaagtgc tgaaggagtg gatagcttca 540
 ggcagaattc cgagctgcgt gagaatgcgc tggaagacgg tgtcaaattc gaggcagaag 600
 20 acgcttgacg atttctaaac gaaacc 626

<210> 240

<211> 30

<212> DNA

25 <213> Artificial Sequence

<220>

<223> PCR primer AfuNde for cloning a gene encoding a polypeptide
having a RNaseHII activity from Archaeoglobus fulgidus

5

<400> 240

aagctggggtt tcatatgaag gcaggcatcg

30

<210> 241

10

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

15

<223> PCR primer AfuBam for cloning a gene encoding a polypeptide
having a RNaseHII activity from Archaeoglobus fulgidus

<400> 241

tggtataaac ggatccgttt agaaatcgtc

30

20

<210> 242

<211> 638

<212> DNA

<213> Archaeoglobus fulgidus

25

<400> 242

catatgaagg caggcatcga tgaggctgga aagggtcgcg tcatcgcccc actggttggtt 60
 gcaggagtgg cttgcagcga tgaggatagg ctgagaaagc ttggtgtgaa agactccaaa 120
 aagctaagtc aggggaggag agaggaacta gccgaggaaa taaggaaaat ctgcagaacg 180
 5 gaggttttga aagtttctcc cgaaaatctc gacgaaagga tggctgctaa aaccataaac 240
 gagattttga aggagtgcta cgtgaaata attctcaggc tgaagccgga aattgcttat 300
 gttgacagtc ctgatgtgat tcccagagaga ctttcgaggg agcttgagga gattacgggg 360
 ttgagagttg tggccgagca caaggcggac gagaagtatc ccctggtagc tgcggcttca 420
 atcatcgcaa aggtggaaag ggagcgggag attgagaggc tgaaagaaaa attcgggggat 480
 10 ttcggcagcg gctatgcgag cgatccgagg acaagagaag tgctgaagga gtggatagct 540
 tcaggcagaa ttccgagctg cgtgagaatg cgctggaaga cggtgtcaaa tctgaggcag 600
 aagacgcttg acgatttcta aacggatccc cgggtacc 638

<210> 243

<211> 205

<212> PRT

<213> Archaeoglobus fulgidus

<400> 243

20 Met Lys Ala Gly Ile Asp Glu Ala Gly Lys Gly Cys Val Ile Gly
 1 5 10 15
 Pro Leu Val Val Ala Gly Val Ala Cys Ser Asp Glu Asp Arg Leu
 20 25 30
 Arg Lys Leu Gly Val Lys Asp Ser Lys Lys Leu Ser Gln Gly Arg
 25 35 40 45

Arg Glu Glu Leu Ala Glu Glu Ile Arg Lys Ile Cys Arg Thr Glu
 50 55 60
 Val Leu Lys Val Ser Pro Glu Asn Leu Asp Glu Arg Met Ala Ala
 65 70 75
 5 Lys Thr Ile Asn Glu Ile Leu Lys Glu Cys Tyr Ala Glu Ile Ile
 80 85 90
 Leu Arg Leu Lys Pro Glu Ile Ala Tyr Val Asp Ser Pro Asp Val
 95 100 105
 Ile Pro Glu Arg Leu Ser Arg Glu Leu Glu Glu Ile Thr Gly Leu
 10 110 115 120
 Arg Val Val Ala Glu HisLys Ala Asp Glu Lys Tyr Pro Leu Val
 125 130 135
 Ala Ala Ala Ser Ile Ile Ala Lys Val Glu Arg Glu Arg Glu Ile
 140 145 150
 15 Glu Arg Leu Lys Glu Lys Phe Gly Asp Phe Gly Ser Gly Tyr Ala
 155 160 165
 Ser Asp Pro Arg Thr Arg Glu Val Leu Lys Glu Trp Ile Ala Ser
 170 175 180
 Gly Arg Ile Pro Ser Cys Val Arg Met Arg Trp Lys Thr Val Ser
 20 185 190 195
 Asn Leu Arg Gln Lys Thr Leu Asp Asp Phe
 200 205

<210> 244

25 <211> 18

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed chimeric oligonucleotide primer designated as MTIS2F to
amplify a portion of Mycobacterium tuberculosis DNA."nucleotides 16 to
18 are ribonucleotides-other nucleotides are deoxyribonucleotides."

<400> 244

10 tctcgtccag cgccgcuu 18

<210> 245

<211> 21

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as MTIS2R to
amplify a portion of Mycobacterium tuberculosis DNA."nucleotides 19 to
20 21 are ribonucleotides-other nucleotides are deoxyribonucleotides."

<400> 245

gacaaaggcc acgtaggcga a 21

25 <210> 246

<211> 20

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed chimeric oligonucleotide primer designated as CT2F to amplify a portion of Chlamydia trachomatis cryptic plasmid DNA."nucleotides 18 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides."

10

<400> 246

ctggatttat cggaaaccuu

20

<210> 247

15 <211> 18

<212> DNA

<213> Artificial Sequence

<220>

20 <223> Designed chimeric oligonucleotide primer designated as CT2R to amplify a portion of Chlamydia trachomatis cryptic plasmid DNA."nucleotides 16 to 18 are ribonucleotides-other nucleotides are deoxyribonucleotides."

25 <400> 247

aggcctctga aacgacuu

18

<210> 248

<211> 19

5 <212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed chimeric oligonucleotide primer designated as K-F-
1033(60) to amplify a portion of Mycobacterium tuberculosis
DNA."nucleotides 17 to 19 are ribonucleotides-other nucleotides are
deoxyribonucleotides."

<400> 248

15 cacatcgatc cggttcagc

19

<210> 249

<211> 20

<212> DNA

20 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as K-R-
1133(62) to amplify a portion of Mycobacterium tuberculosis
25 DNA."nucleotides 18 to 20 are ribonucleotides-other nucleotides are

deoxyribonucleotides."

<400> 249

tgatcgtctc ggctagtgc

20

5

<210> 250

<211> 22

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed chimeric oligonucleotide primer designated as K-F-1033(68) to amplify a portion of Mycobacterium tuberculosis DNA."nucleotides 20 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides."

15

<400> 250

gtacacatcg atccggttca gc

22

20

<210> 251

<211> 22

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed chimeric oligonucleotide primer designated as K-R-1133(68) to amplify a portion of Mycobacterium tuberculosis DNA."nucleotides 20 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides."

5

<400> 251

gttgatcgtc tcggetagtg ca

22

<210> 252

10

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

15

<223> Designed oligonucleotide primer designated as F26 to amplify a portion of Mycobacterium tuberculosis DNA.

<400> 252

ccggagactc cagttcttgg

20

20

<210> 253

<211> 20

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed oligonucleotide primer designated as R1310 to amplify a portion of Mycobacterium tuberculosis DNA.

5 <400> 253

gtctctggcg ttgagcgtag

20

<210> 254

<211> 22

10 <212> DNA

<213> Artificial Sequence

<220>

15 <223> Designed chimeric oligonucleotide primer designated as pDON-AI-68-1 to amplify a portion of pDON-AI."nucleotides 20 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides."

<400> 254

actagctctg tatctggcgg ac

22

20

<210> 255

<211> 23

<212> DNA

<213> Artificial Sequence

25

<220>

<223> Designed chimeric oligonucleotide primer designated as pDON-AI-68-2 to amplify a portion of pDON-AI."nucleotides 21 to 23 are ribonucleotides-other nucleotides are deoxyribonucleotides."

5

<400> 255

acgatcggga ttttggact cag 23

<210> 256

10 <211> 300

<212> DNA

<213> Homo sapiens proto-oncogene Wnt-5a

<400> 256

15 cactagattt ttgtttggg gaggttggt tgaacataaa tgaaatatcc tgtatatttct 60
tagggatact tggtagtaa attataatag tagaataat acatgaatcc cattcacagg 120
tttctcagcc caagcaacaa ggtaattgag tgccattcag cactgcacca gagcagacaa 180
cctatttgag gaaaaacagt gaaatccacc ttctcttca cactgagccc tctctgattc 240
ctccgtgttg tgatgtgatg ctggccacgt ttccaaacgg cagctccact gggccccctt 300

20

<210> 257

<211> 300

<212> DNA

<213> Homo sapiens ribosomal protein S5

25

<400> 257

cgccgagtga cagagacgct caggctgtgt tctcaggatg accgagtggg agacagcagc 60
accagcggtg gcagagaccc cagacatcaa gctctttggg aagtggagca ccgatgatgt 120
gcagatcaat gacatttccc tgcaggatta cattgcagtg aaggagaagt atgccaagta 180
5 cctccctcac agtgcagggc ggtatgccgc aaacgctttc cgcaaagctc agtgtcccat 240
tgtggagcgc ctactaact ccatgatgat gcacggccgc aacaacggca agaagctcat 300

<210> 258

<211> 300

10 <212> DNA

<213> Homo sapiens diaphorase

<400> 258

tctatacaaa ttttcagaag gttattttct ttatcattgc taaactgatg acttaccatg 60
15 ggatggggtc cagtcccatg accttggggg acaattgtaa acctagagtt ttatcaactt 120
tggtgaacag ttttggcata atagtcaatt tctacttctg gaagtcactt cattccactg 180
ttggtattat ataattcaag gagaatatga taaaacactg cctctttgtg gtgcattgaa 240
agaagagatg agaaatgatg aaaagggttc ctgaaaaatg ggagacagcc tcttacttgc 300

20 <210> 259

<211> 300

<212> DNA

<213> Human protocadherin

25 <400> 259

agtctcttgg gatccccctaa ccagagcctt ttgccatag ggctgcacac tggtaaate 60
 agtactgccc gtccagtcca agacacagat tcaccagge agactctcac ggtcttgatc 120
 aaagacaatg gggagccttc gctctccacc actgctaccc tcaactgtgtc agtaaccgag 180
 gactctcttg aagcccgagc cgagttcccc tctggctctg ccccccggga gcagaaaaaa 240
 5 aatctcacct tttatctact tctttcccta atcctgggtt ctgtggggtt tgtggtcaca 300

<210> 260

<211> 80

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide for making of pIC62.

15 <400> 260

catgtacatc acagtagtgc ttacacagggt ttccggcca taatggcctt tctgtgtgt 60
 gtgtacagc tagtcagtca 80

<210> 261

20 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

25 <223> Designed chimeric oligonucleotide primer designated as

ICAN2."nucleotides 19 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides."

<400> 261

5 actgactagc thtagcacac 20

<210> 262

<211> 20

<212> DNA

10 <213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as
ICAN6."nucleotides 19 to 20 are ribonucleotides-other nucleotides are
15 deoxyribonucleotides."

<400> 262

acatcacagt agtcgttcac 20

20 <210> 263

<211> 20

<212> DNA

<213> Artificial Sequence

25 <220>

<223> Designed oligonucleotide primer designated as ICAN2 DNA."

<400> 263

actgactagc ttagcacac

20

5

<210> 264

<211> 20

<212> DNA

<213> Artificial Sequence

10

<220>

<223> Designed oligonucleotide primer designated as ICAN6 DNA.

<400> 264

acatcacagt agtcgttcac

20

15

<210> 265

<211> 23

<212> DNA

<213> Artificial Sequence

20

<220>

<223> Designed oligonucleotide primer to amplify a portion of
ribosomal protein S18-encoding sequence from mouse.

25

<400> 265

gtctctagtg atccctgaga agt

23

<210> 266

5 <211> 23

<212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed oligonucleotide primer to amplify a portion of
ribosomal protein S18-encoding sequence from mouse.

<400> 266

tggatacacc cacagttcgg ccc

23

<210> 267

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of
transferrin receptor (TFR)-encoding sequence from mouse.

<400> 267

ccgcgctccg acaagtagat gga

23

<210> 268

<211> 23

5 <212> DNA

<213> Artificial Sequence

<220>

10 <223> Designed oligonucleotide primer to amplify a portion of
transferrin receptor (TFR)-encoding sequence from mouse.

<400> 268

ccaaagagtg caaggtctgc etc

23

15 <210> 269

<211> 23

<212> DNA

<213> Artificial Sequence

20 <220>

<223> Designed oligonucleotide primer to amplify a portion of stromal
cell derived factor 4 (Sdf4)-encoding sequence from mouse.

<400> 269

25 tctgatggat gcaaccgcta gac

23

<210> 270

<211> 23

<212> DNA

5 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of stromal
cell derived factor 4 (Sdf4)-encoding sequence from mouse.

10

<400> 270

gaactcttca tgcacgttgc ggg

23

<210> 271

15

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

20 <223> Designed oligonucleotide primer to amplify a portion of
cytoplasmic beta-actin encoding sequence from mouse.

<400> 271

tgatggtggg aatgggtcag aag

23

25

<210> 272

<211> 23

<212> DNA

<213> Artificial Sequence

5

<220>

<223> Designed oligonucleotide primer to amplify a portion of cytoplasmic beta-actin encoding sequence from mouse.

10

<400> 272

agaagcactt gcggtgcacg atg

23

<210> 273

<211> 23

15

<212> DNA

<213> Artificial Sequence

<220>

20

<223> Designed oligonucleotide primer to amplify a portion of ornithine decarboxylase-encoding sequence from mouse.

<400> 273

gatgaaagtc gccagagcac atc

23

25

<210> 274

<211> 23

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer to amplify a portion of
ornithine decarboxylase-encoding sequence from mouse.

<400> 274

10 ttgatacctag cagaagcaca ggc

23

<210> 275

<211> 23

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of
hypoxanthine guanine phosphoribosyl transferase (HPRT)-encoding
20 sequence from mouse.

<400> 275

ggacaggact gaaagacttg ctc

23

25 <210> 276

<211> 23

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer to amplify a portion of hypoxanthine guanine phosphoribosyl transferase (HPRT)-encoding sequence from mouse.

10 <400> 276

gtctggcctg tatccaacac ttc

23

<210> 277

<211> 23

15 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer to amplify a portion of tyrosine 3-monooxygenase encoding sequence from mouse.

20

<400> 277

atgagctggt gcagaaggcc aag

23

25 <210> 278

<211> 23

<212> DNA

<213> Artificial Sequence

5 <220>

<223> Designed oligonucleotide primer to amplify a portion of tyrosine
3-monooxygenase encoding sequence from mouse.

<400> 278

10 ttccctctct tctctgctt ctg

23

<210> 279

<211> 21

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as MCS-F.

20 <400> 279

ccattcaggc tgcgcaatgt t

21

<210> 280

<211> 22

25 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as MCS-R

5

<400> 280

tggcacgaca ggtttcccga ct

22

<210> 281

10

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

15

<223> Designed chimeric oligonucleotide primer designated as MF2N3(24).

"nucleotides 22 to 24 are ribonucleotides-other nucleotides are deoxyribonucleotides."

<400> 281

20

gctgcaaggc gattaagttg ggua

24

<210> 282

<211> 24

<212> DNA

25

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as MR1N3(24).

"nucleotides 22 to 24 are ribonucleotides-other nucleotides are
5 deoxyribonucleotides."

<400> 282

ctttatgctt ccggctcgta tguu

24

10 <210> 283

<211> 16

<212> DNA

<213> Artificial Sequence

15 <220>

<223> Designed chimeric oligonucleotide primer designated as MTIS2F-16
to amplify a portion of Mycobacterium tuberculosis DNA."nucleotides 14
to 16 are ribonucleotides-other nucleotides are deoxyribonucleotides."

20 <400> 283

tcgtccagcg ccgcuu

16

<210> 284

<211> 20

25 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as MTIS2R-
 5 ACC to amplify a portion of Mycobacterium tuberculosis
 DNA."nucleotides 18 to 20 are ribonucleotides-other nucleotides are
 deoxyribonucleotides."

<400> 284

10 caaaggccac gtaggcgaac 20

<210> 285

<211> 20

<212> DNA

15 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as MTIS-PCR-F-2 to
 amplify a portion of Mycobacterium tuberculosis DNA.

20

<400> 285

cgaccgcac aaccgggagc 20

<210> 286

25 <211> 20

<212> DNA

<213> Artificial Sequence

<220>

5 <223> Designed oligonucleotide primer designated as MTIS-PCR-R-2 to
amplify a portion of Mycobacterium tuberculosis DNA.

<400> 286

cccaggatcc tgcgagcgta

20

10

<210> 287

<211> 45

<212> DNA

<213> Artificial Sequence

15

<220>

<223> Designed oligonucleotide primer designated as SP6-HCV-F to
amplify a portion of HCV.

20

<400> 287

ccatttaggt gacactatag aatactgatg ggggcgacac tccac

45

<210> 288

<211> 45

25

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide primer designated as SP6-HCV-R to
5 amplify a portion of HCV

<400> 288

agctctaata cgactcacta tagggtcgca agcaccctat caggc

45

<210> 289

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as HCV-A S
to amplify a portion of HCV. "nucleotides 18 to 20 are ribonucleotides-
other nucleotides are deoxyribonucleotides."

<400> 289

gggtcctttc ttggatcaac

20

<210> 290

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed chimeric oligonucleotide primer designated as HCV-A A
 5 to amplify a portion of HCV. "nucleotides 18 to 20 are
 ribonucleotides-other nucleotides are deoxyribonucleotides."

<400>, 290

gaccaaacac tactcgguca

20